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## Early Season Snowfall across Northeast Montana

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An impressive snowstorm brought over a foot of heavy, wet snow to portions of southeast Montana and North Dakota October 4<sup>th</sup> through the 5<sup>th</sup>. Although heavy snow is not uncommon in this region, it was



Heavy snowfall in Glendive. The snow collected on the leaves, causing the limbs to bow.

earlier in the season than usual. The snow accumulated even after a recent warm spell. Just a few days before the storm from September 29 to October 1, 2005, temperatures were in the upper 80s to near 90 degrees in the areas hardest hit. So what happened? A strong low pressure system originating from the Gulf of Alaska brought Pacific Ocean moisture and much cooler air into the region. A strong surface low that developed in southern Nevada eventually lifted northeast through Wyoming and southeastern Montana, then into the Dakotas. The combination of the moisture, cold air, and surface low pressure system is what produced the heavy snow. Precipitation started as rain on the 4<sup>th</sup>, then changed over to snow on the night of the 4<sup>th</sup>, and continued to fall as snow into the early afternoon hours of the 5<sup>th</sup>. In addition, strong winds developed early on the 5<sup>th</sup> which created visibility problems across the region.

The wet snow caused extensive damage to tree limbs and power lines. Tree damage was worse than usual since the storm came so early in the season when leaves were still on tree limbs. The leaves allowed more surface area for the snow to collect, adding more weight than if the trees were bare limbs only. Many areas lost power for a substantial amount of time, some going without for over 24 hours. Interstate 94 was closed from Bismarck, ND to Miles City, MT due to the heavy snow.

Snowfall totals varied greatly over northeast Montana with those near the North Dakota border seeing the highest amounts. Glasgow and point northwest did not receive any snow. In contrast, an observer 12 miles northwest of Carlyle in Wibaux County received 18 inches! Fortunately, the ground temperature was still warm enough to help the snow quickly melt after the storm system moved out of the area.

